



# TORQ Analysis of Printing Machine Operators to Paper Goods Machine Setters, Operators, and Tenders

## INPUT SECTION:

Transfer	Title	O*NET	Filters		
From Title:	Printing Machine Operators	51-5023.00	Abilities:	Importance Level: 50	Weight: 1
To Title:	Paper Goods Machine Setters, Operators, and Tenders	51-9196.00	Skills:	Importance Level: 69	Weight: 1
Labor Market Area:	Maine Statewide		Knowledge:	Importance Level: 69	Weight: 1

## OUTPUT SECTION:

Grand TORQ:

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Ability TORQ		Skills TORQ		Knowledge TORQ	
Level	70	Level	86	Level	87

Gaps To Narrow if Possible				Upgrade These Skills				Knowledge to Add			
Ability	Level	Gap	Impt	Skill	Level	Gap	Impt	Knowledge	Level	Gap	Impt
Auditory Attention	46	29	50	Learning Strategies	64	11	69	Production and Processing	55	12	76
Selective Attention	44	19	56	Critical Thinking	60	7	74				
Oral Comprehension	44	14	53	Reading Comprehension	54	3	69				
Oral Expression	42	12	50								
Problem Sensitivity	39	9	59								
Arm-Hand Steadiness	42	8	59								
Deductive Reasoning	37	8	50								
Control Precision	48	7	56								
Finger Dexterity	42	7	53								
Information Ordering	42	4	53								
Manual Dexterity	41	4	53								
Near Vision	48	3	56								

LEVEL and IMPT (IMPORTANCE) refer to the Target Paper Goods Machine Setters, Operators, and Tenders. GAP refers to level difference between Printing Machine Operators and Paper Goods Machine Setters, Operators, and Tenders.

## ASK ANALYSIS

Ability Level Comparison - Abilities with importance scores over 50



Description	Printing Machine Operators	Paper Goods Machine Setters, Operators, and Tenders	Importance
Problem Sensitivity	30	39	59
Arm-Hand Steadiness	34	42	59
Selective Attention	25	44	56
Control Precision	41	48	56
Near Vision	45	48	56
Oral Comprehension	30	44	53
Information Ordering	38	42	53
Manual Dexterity	37	41	53
Finger Dexterity	35	42	53
Oral Expression	30	42	50
Deductive Reasoning	29	37	50
Auditory Attention	17	46	50

## Skill Level Comparison - Abilities with importance scores over 69

Description	Printing Machine Operators	Paper Goods Machine Setters, Operators, and Tenders	Importance
Operation Monitoring	64	62	78
Operation and Control	66	60	75
Critical Thinking	53	60	74
Equipment Maintenance	63	58	74
Time Management	49	48	71
Quality Control Analysis	56	50	70
Reading Comprehension	51	54	69
Learning Strategies	53	64	69

## Knowledge Level Comparison - Knowledge with importance scores over 69

Description	Printing Machine Operators	Paper Goods Machine Setters, Operators, and Tenders	Importance
Production and Processing	43	55	76
English Language	42	40	71

## Experience &amp; Education Comparison

Related Work Experience Comparison			Required Education Level Comparison		
Description	Printing Machine Operators	Paper Goods Machine Setters, Operators, and Tenders	Description	Printing Machine Operators	Paper Goods Machine Setters, Operators, and Tenders



Tenders					
10+ years	0%	0%	Doctoral	0%	0%
8-10 years	3%	3%	Professional Degree	0%	0%
6-8 years	0%	0%	Post-Masters Cert	0%	0%
4-6 years	7%	0%	Master's Degree	0%	0%
2-4 years	24%	0%	Post-Bachelor Cert	0%	0%
1-2 years	13%	41%	Bachelors	0%	0%
6-12 months	3%	1%	AA or Equiv	0%	0%
3-6 months	6%	5%	Some College	5%	0%
1-3 months	0%	16%	Post-Secondary Certificate	8%	0%
0-1 month	0%	3%	High School Diploma or GED	85%	74%
None	39%	27%	No HSD or GED	1%	24%

## Printing Machine Operators

## Paper Goods Machine Setters, Operators, and Tenders

## Most Common Educational/Training Requirement:

Moderate-term on-the-job training

Moderate-term on-the-job training

## Job Zone Comparison

## 2 - Job Zone Two: Some Preparation Needed

Some previous work-related skill, knowledge, or experience may be helpful in these occupations, but usually is not needed. For example, a teller might benefit from experience working directly with the public, but an inexperienced person could still learn to be a teller with little difficulty.

These occupations usually require a high school diploma and may require some vocational training or job-related course work. In some cases, an associate's or bachelor's degree could be needed.

Employees in these occupations need anywhere from a few months to one year of working with experienced employees.

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## Tasks

## Printing Machine Operators

## Core Tasks

## Generalized Work Activities:

- Controlling Machines and Processes - Using either control mechanisms or direct physical activity to operate machines or processes (not including computers or vehicles).
- Getting Information - Observing, receiving, and otherwise obtaining information from all relevant sources.
- Handling and Moving Objects - Using hands and arms in handling, installing, positioning, and moving materials, and manipulating things.
- Inspecting Equipment, Structures, or Material - Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.
- Performing General Physical Activities - Performing physical activities that require considerable use of your arms and legs and moving your whole body, such as

## Paper Goods Machine Setters, Operators, and Tenders

## Core Tasks

## Generalized Work Activities:

- Controlling Machines and Processes - Using either control mechanisms or direct physical activity to operate machines or processes (not including computers or vehicles).
- Monitor Processes, Materials, or Surroundings - Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.
- Getting Information - Observing, receiving, and otherwise obtaining information from all relevant sources.
- Inspecting Equipment, Structures, or Material - Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.
- Handling and Moving Objects - Using hands and arms in handling, installing, positioning, and moving materials, and



climbing, lifting, balancing, walking, stooping, and handling of materials.

### Specific Tasks

#### Occupation Specific Tasks:

- Apply glue or tape to holes in screens in order to repair leaks.
- Attach cloth to take-up rollers, placing it in feeding position and threading it through equipment as necessary.
- Blend and test paint, inks, stains, and solvents according to types of material being printed and work order specifications.
- Clean and lubricate printing machines and components, using oil, solvents, brushes, rags, and hoses.
- Coordinate printing activities with activities of workers who set up, clean, and feed machines.
- Correct misprinted materials, using materials such as ink eradicators or solvents.
- Direct and monitor activities of workers feeding, inspecting, and tending printing machines and materials.
- Examine job orders to determine details such as quantities to be printed, production times, stock specifications, colors, and color sequences.
- Input instructions in order to program automated machinery, using a computer keyboard.
- Inspect and examine printed products for print clarity, color accuracy, conformance to specifications, and external defects.
- Load, position, and adjust unprinted materials on holding fixtures or in equipment loading and feeding mechanisms.
- Maintain records of goods produced, supplies used, production costs, and machine maintenance and repair activities.
- Measure screens, and use measurements to center and align screens in proper positions and sequences on machines, using gauges and hand tools.
- Monitor and control operation of auxiliary equipment used to assemble and finish products.
- Monitor feeding, printing, and racking processes of presses in order to maintain specified operating levels and to detect malfunctions; make any necessary adjustments.
- Monitor stocks of materials such as paper, ink, and metal in order to maintain supplies during equipment operation.
- Operate equipment at slow speed to ensure proper ink coverage, alignment, and registration.
- Pack and label cartons, boxes, or bins of finished products.

### manipulating things.

### Specific Tasks

#### Occupation Specific Tasks:

- Adjust guide assemblies, forming bars, and folding mechanisms according to specifications, using hand tools.
- Cut products to specified dimensions, using hand or power cutters.
- Disassemble machines to maintain, repair, or replace broken or worn parts, using hand or power tools.
- Examine completed work to detect defects and verify conformance to work orders, and adjust machinery as necessary to correct production problems.
- Fill glue and paraffin reservoirs, and position rollers to dispense glue onto paperboard.
- Install attachments to machines for gluing, folding, printing, or cutting.
- Lift tote boxes of finished cartons, and dump cartons into feed hoppers.
- Load automatic stapling mechanisms.
- Measure, space, and set saw blades, cutters, and perforators, according to product specifications.
- Monitor finished cartons as they drop from forming machines into rotating hoppers and then into gravity feed chutes, in order to prevent jamming.
- Observe operation of various machines to detect and correct machine malfunctions such as improper forming, glue flow, or pasteboard tension.
- Place rolls of paper or cardboard on machine feedtracks, and thread paper through gluing, coating, and slitting rollers.
- Remove finished cores, and stack or place them on conveyors for transfer to other work areas.
- Stamp products with information such as dates, using hand stamps or automatic stamping devices.
- Start machines and move controls to regulate tension on pressure rolls, to synchronize speed of machine components, and to adjust temperatures of glue or paraffin.

### Detailed Tasks

#### Detailed Work Activities:

- adjust production equipment/machinery setup
- examine products or work to verify conformance to specifications
- install equipment or attachments on machinery or related structures
- load or unload material or workpiece into machinery
- load, unload, or stack containers,



- Place printed items in ovens to dry or set ink.
- Place spools of thread or wire on holders, and thread through machines.
- Position knives at specified distances from edges of plastic material in order to trim excess material from edges.
- Pour ink into pans, and smooth paint onto stencils, using flat-bladed knives.
- Pour or spread paint, ink, color compounds, and other materials into reservoirs, troughs, hoppers, or color holders of printing units, making measurements and adjustments to control color and viscosity.
- Prepare and treat lithographic plates with various chemicals to clean and preserve plates and fix images.
- Provide assistance in the design and layout of forms and materials to be printed.
- Push buttons, turn handles or move controls and levers to start and control printing machines.
- Remove printed materials from presses, using handtrucks, electric lifts, or hoists, and transport them to drying, storage or finishing areas.
- Repair, maintain, or adjust equipment.
- Reposition printing plates, adjust pressure rolls, or otherwise adjust machines to improve print quality, using knobs, handwheels, or hand tools.
- Requisition supplies, materials, and equipment, and receive stock when it arrives.
- Select and install printing plates, rollers, feed guides, gauges, screens, stencils, type, dies, and cylinders in machines according to specifications, using hand tools.
- Set and adjust speed, temperature, ink flow, and positions and pressure tolerances of equipment.
- Squeeze or spread ink on plates, pads, or rollers, using putty knives, brushes, or sponges.
- Thin printing compounds, using specified thinners.

#### Detailed Tasks

##### Detailed Work Activities:

- adjust production equipment/machinery setup
- assure quality control in printing processes
- attach or mark identification onto products or containers
- clean equipment or machinery
- collect payment
- demonstrate or explain assembly or use of equipment

materials, or products

- maintain consistent production quality
- maintain or repair industrial or related equipment/machinery
- monitor production machinery/equipment operation to detect problems
- move or fit heavy objects
- operate pulp or paper making equipment
- read specifications
- read work order, instructions, formulas, or processing charts
- set up production equipment or machinery
- understand technical operating, service or repair manuals
- use hand or power tools
- use precision measuring tools or equipment

#### Technology - Examples



- determine film exposure settings
- determine specifications
- develop film or other photographic medium
- direct and coordinate activities of workers or staff
- distinguish colors
- examine products or work to verify conformance to specifications
- fabricate printing plates
- identify color or balance
- install equipment or attachments on machinery or related structures
- load or unload material or workpiece into machinery
- load, unload, or stack containers, materials, or products
- maintain consistent production quality
- maintain or repair industrial or related equipment/machinery
- maintain production or work records
- measure, weigh, or count products or materials
- mix paint, ingredients, or chemicals, according to specifications
- mix printing solutions
- monitor production machinery/equipment operation to detect problems
- move or fit heavy objects
- operate bindery equipment
- operate cameras
- operate fabric printing equipment
- operate graphic reproduction equipment
- operate hoist, winch, or hydraulic boom
- operate printing equipment/machinery
- operate scanner
- perform safety inspections in manufacturing or industrial setting
- process photographic prints
- read production layouts
- read specifications
- read work order, instructions, formulas, or processing charts
- receive customer orders
- restore photographs
- retouch negatives or prints
- set page layout or composition
- set up production equipment or machinery
- strip negatives
- understand technical operating, service or repair manuals
- use color analyzer
- use densitometer
- use desktop publishing software
- use hand or power tools



- use precision measuring tools or equipment

#### Technology - Examples

##### Calendar and scheduling software

- Job scheduling software

##### Data base user interface and query software

- Printing management system software

##### Electronic mail software

- Microsoft Outlook

##### Inventory management software

- Inventory tracking software

##### Spreadsheet software

- Microsoft Excel

##### Word processing software

- Microsoft Word

#### Tools - Examples

- Adjustable wrenches

- Materials conveyors

- Conductivity indicators

- Densitometers

- Desktop computers

- Flexo presses

- Grease guns

- Claw hammers

- Hand trucks

- Packing gauges

- Hoists

- Pallet jacks

- Letter presses

- Electric lifts

- Vise grip pliers

- Hand-held magnifiers

- Micrometers

- Offset printing equipment

- Paper drills



- Paper joggers
- Perforators
- Personal computers
- pH indicators
- Digital copiers
- Gravure presses
- Platemaking equipment
- Folding equipment
- Collating equipment
- Cutting equipment
- Multicolor presses
- Putty knives
- Ratchets
- Phillips head screwdrivers
- Screen printing presses
- Stackers
- Stapling machines
- Measuring tapes
- Strappers

### Labor Market Comparison

Description	Printing Machine Operators	Paper Goods Machine Setters, Operators, and Tenders	Difference
Median Wage	\$ 29,710	\$ 38,230	\$ 8,520
10th Percentile Wage	\$ 21,270	\$ 25,850	\$ 4,580
25th Percentile Wage	N/A	N/A	N/A
75th Percentile Wage	\$ 36,080	\$ 45,200	\$ 9,120
90th Percentile Wage	\$ 44,010	\$ 51,680	\$ 7,670
Mean Wage	\$ 30,870	\$ 38,330	\$ 7,460
Total Employment - 2007	790	910	120
Employment Base - 2006	820	951	131
Projected Employment - 2016	798	700	-98



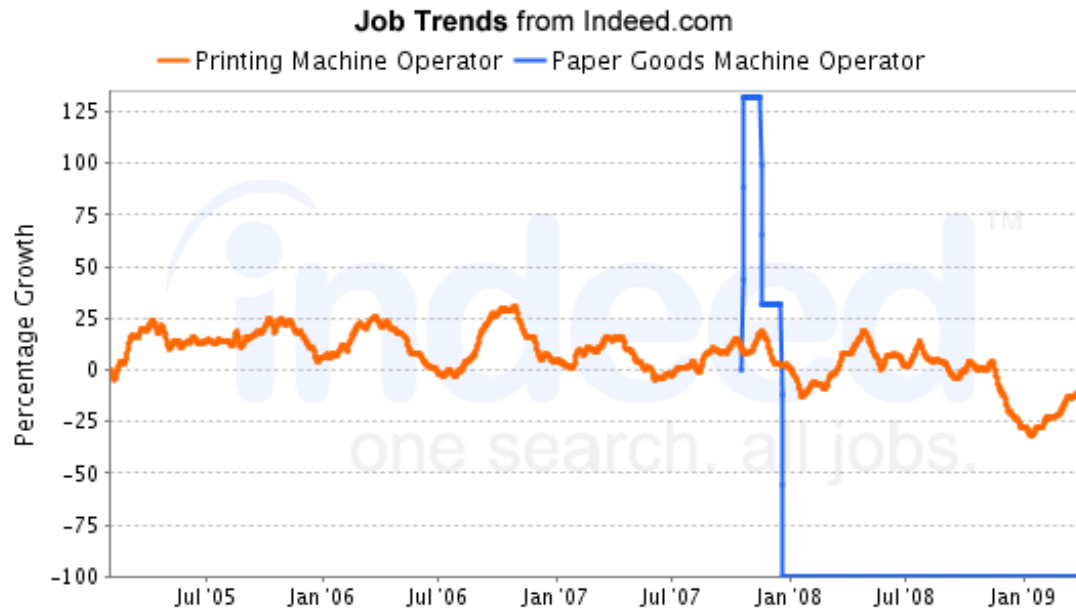


Projected Job Growth - 2006-2016	-2.7 %	-26.4 %	-23.7 %
Projected Annual Openings - 2006-2016	18	23	5

### National Job Posting Trends

Trend for Printing Machine Operators

Trend for Paper Goods Machine Setters, Operators, and Tenders

Data from [Indeed](http://Indeed.com)

### Recommended Programs

No program data for the occupation.

### Maine Statewide Promotion Opportunities for Printing Machine Operators

O*NET Code	Title	Grand TORQ	Job Zone	Employment	Median Wage	Difference	Growth	Annual Job Openings
51-5023.00	Printing Machine Operators	100	2	790	\$29,710.00	\$0.00	-3%	18
51-4193.00	Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic	86	2	120	\$32,160.00	\$2,450.00	16%	5



51-4122.00	Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders	84	2	120	\$36,960.00	\$7,250.00	2%	3
51-9196.00	Paper Goods Machine Setters, Operators, and Tenders	81	2	910	\$38,230.00	\$8,520.00	-26%	23
51-4034.00	Lathe and Turning Machine Tool Setters, Operators, and Tenders, Metal and Plastic	80	3	110	\$34,350.00	\$4,640.00	-9%	2
51-9071.06	Gem and Diamond Workers	80	2	220	\$32,520.00	\$2,810.00	7%	7
51-5021.00	Job Printers	79	3	140	\$31,890.00	\$2,180.00	-10%	2
51-4121.07	Solderers and Brazers	79	2	1,610	\$38,030.00	\$8,320.00	7%	49
51-9032.00	Cutting and Slicing Machine Setters, Operators, and Tenders	78	2	710	\$31,350.00	\$1,640.00	-23%	12
51-2021.00	Coil Winders, Tapers, and Finishers	77	2	90	\$31,910.00	\$2,200.00	-53%	1
51-9023.00	Mixing and Blending Machine Setters, Operators, and Tenders	77	1	420	\$36,040.00	\$6,330.00	-9%	7
51-9121.00	Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	77	2	850	\$38,860.00	\$9,150.00	-26%	19
51-9122.00	Painters, Transportation Equipment	77	2	320	\$32,230.00	\$2,520.00	2%	8
51-4023.00	Rolling Machine Setters, Operators, and Tenders, Metal and Plastic	76	2	0	\$33,460.00	\$3,750.00	0%	0
51-4121.06	Welders, Cutters, and Welder Fitters	76	2	1,610	\$38,030.00	\$8,320.00	7%	49

### Top Industries for Paper Goods Machine Setters, Operators, and Tenders

Industry	NAICS	% in Industry	Employment	Projected Employment	% Change
Converted paper product manufacturing	322200	60.48%	68,412	57,411	-16.08%



Pulp, paper, and paperboard mills	322100	21.93%	24,800	17,202	-30.64%
Printing and related support activities	323100	8.22%	9,293	7,363	-20.77%
Newspaper publishers	511110	1.36%	1,536	1,316	-14.33%
Plastics product manufacturing	326100	1.27%	1,439	1,525	6.00%
Wholesale electronic markets and agents and brokers	425100	0.67%	762	865	13.48%
Employment services	561300	0.55%	618	783	26.56%
Animal slaughtering and processing	311600	0.46%	521	595	14.13%
Advertising and related services	541800	0.40%	448	505	12.83%
Paper and paper product merchant wholesalers	424100	0.39%	440	470	6.83%
Other general purpose machinery manufacturing	333900	0.19%	219	198	-9.73%
Miscellaneous durable goods merchant wholesalers	423900	0.09%	100	114	14.81%
Warehousing and storage	493100	0.07%	76	101	33.58%
Other electrical equipment and component manufacturing	335900	0.06%	69	64	-7.34%
Fruit and vegetable preserving and specialty food manufacturing	311400	0.05%	61	55	-9.33%

### Top Industries for Printing Machine Operators

Industry	NAICS	% in Industry	Employment	Projected Employment	% Change
Printing and related support activities	323100	50.92%	100,610	90,254	-10.29%
Newspaper publishers	511110	7.59%	14,990	12,841	-14.33%
Converted paper product manufacturing	322200	6.58%	12,998	10,908	-16.08%
Advertising and related services	541800	3.23%	6,387	7,207	12.83%
Plastics product manufacturing	326100	2.76%	5,460	5,788	6.00%
Specialized design services	541400	1.92%	3,793	5,076	33.81%
Textile and fabric finishing and fabric coating mills	313300	1.66%	3,277	2,021	-38.33%
Self-employed workers, primary job	000601	1.45%	2,864	3,052	6.54%
Employment services	561300	1.41%	2,783	3,522	26.56%
Colleges, universities, and professional schools, public and private	611300	0.89%	1,761	1,970	11.87%
Animal slaughtering and processing	311600	0.86%	1,706	1,947	14.13%
Paper and paper product merchant wholesalers	424100	0.80%	1,585	1,693	6.83%
Self-employed workers, secondary job	000602	0.74%	1,465	1,459	-0.45%
Cut and sew apparel manufacturing	315200	0.64%	1,266	534	-57.77%

Clothing stores	448100	0.61%	1,203	1,263	4.97%
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